We claim:

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1 An instrument for measuring the medullary canal of a long bone in order to determine the proper size for a stem centralizer, said instrument comprising:

an elongated central portion defining opposed first and second ends; and

a contact portion extending from the first end of said elongated central portion, said contact portion having a contact area for contact with the medullary canal and defining a relief area for providing clearance between the instrument and the medullary canal.

- 2. The instrument of claim 1, further comprising a second contact portion extending from the second end of said elongated central portion, said second contact portion having a contact area for contact with the medullary canal and defining a relief area for providing clearance between the instrument and the medullary canal.
- 3. The instrument of claim 1, wherein said contact portion comprises a plurality of contact areas for contact with the medullary canal and defines a plurality of relief areas for providing clearance between the instrument and the medullary canal.
- 4. The instrument of claim 3, wherein said contact portion has 2 to 6 contact areas for contact with the medullary canal and has 2 to 6 relief areas.
- 5. The instrument of claim 4, wherein said contact portion has 4 equally spaced apart contact areas for contact with the medullary canal and has 4 equally spaced apart relief areas.
- 6. The instrument of claim 1, wherein said contact area is arcuate.

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- 7. The instrument of claim 1, wherein said elongated central portion is generally cylindrical.
- 8. The instrument of claim 1, wherein said contact portion is generally pear shaped.
- 9. The instrument of claim 1, wherein said elongated central portion includes a plurality of spaced apart marks corresponding to at least one of a metric dimension and an inch dimension.
- 10. An instrument for measuring the medullary canal of a long bone in order to determine the proper size for a stem centralizer, said instrument comprising:

an elongated central portion defining opposed first and second ends;

- a first contact portion extending from the first end

 15 of said elongated central portion, said first contact
 portion having a contact area for contact with the
 medullary canal and defining a relief area for providing
 clearance between the instrument and the medullary canal;
 and
- a second contact portion extending from the second end of said elongated central portion, said second contact portion having a contact area for contact with the medullary canal and defining a relief area for providing clearance between the instrument and the medullary canal.
 - 11. The instrument of claim 10, wherein at least one of said first contact portion and said second contact portion comprises a plurality of contact areas for contact with the medullary canal and defines a plurality of relief areas for providing clearance between the instrument and the medullary canal.
 - 12. The instrument of claim 11, wherein at least one of said first contact portion and said second contact

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portion has 2 to 6 contact areas for contact with the medullary canal and has 2 to 6 relief areas.

- 13. The instrument of claim 12, wherein at least one of said first contact portion and said second contact portion has 4 equally spaced apart contact areas for contact with the medullary canal and has 4 equally spaced apart relief areas.
- 14. The instrument of claim 10, wherein at least one of said first contact portion and said second contact portion include an arcuate contact area.
- 15. The instrument of claim 10, wherein said elongated central portion is generally cylindrical.
- 16. The instrument of claim 10, wherein at least one of said first contact portion and said second contact portion is generally pear shaped.
- 17. The instrument of claim 10, wherein said elongated central portion includes a plurality of spaced apart marks corresponding to at least one of a metric dimension and an inch dimension.
- 20 18. A kit for use in performing total hip arthroplasty, said kit comprising:

A plurality of instruments, each of said plurality of instruments adapted for measuring the medullary canal of a femur, each of said plurality of instruments including an elongated central portion defining opposed first and second ends, and a contact portion extending from the first end of the elongated central portion, the contact portion having a contact area for contact with the medullary canal and defining a relief area for providing clearance between the instrument and the medullary canal;

a hip stem for implantation into the medullary canal; and

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a plurality of stem centralizers for cooperation with said hip stem and for implantation into the medullary canal, each of said plurality of stem centralizers corresponding to one of the contact portions of said plurality of instruments.

- 19. The kit of claim 18, wherein each of said instruments further comprise a second contact portion extending from the second end of said elongated central portion, said second contact portion having a contact area for contact with the medullary canal and defining a relief area for providing clearance between the instrument and the medullary canal.
- 20. The kit of claim 18, wherein the contact portion of at least one of said plurality of instruments comprises a plurality of contact areas for contact with the medullary canal and defines a plurality of relief areas for providing clearance between the at least one of said plurality of instruments and the medullary canal.
- 21. The kit of claim 20, wherein the contact portion of at least one of said plurality of instruments has 2 to 6 contact areas for contact with the medullary canal and has 2 to 6 relief areas.
 - 22. The kit of claim 18, wherein the elongated central portion of each of said instruments includes a plurality of spaced apart marks corresponding to at least one of a metric dimension and an inch dimension.
 - 23. A method for performing joint arthroplasty comprising:

resecting a long bone;

preparing the medullary canal of a long bone;

providing a plurality of instruments for measuring the medullary canal of the long bone, each of said instruments

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including an elongated central portion defining opposed first and second ends, and a contact portion extending from the first end of the elongated central portion, the contact portion having a plurality of contact areas for contact with the medullary canal and defining a plurality of relief areas for providing clearance between the instrument and the medullary canal;

inserting one of said plurality of instruments into the canal;

providing a plurality of centralizers for implanting into the medullary canal of the long bone, each of said plurality of centralizers corresponding to one of said plurality of instruments;

determining the appropriateness of said one of said plurality of instruments;

inserting said one of said plurality of centralizers corresponding to said one of said plurality of instruments into the canal;

providing a stem; and

implanting said stem in the medullary canal of a long bone.

24. An instrument for measuring the medullary canal of a resected long bone in order to determine the proper size for a stem centralizer, said instrument comprising:

an elongated central portion defining opposed first and second ends; and

a contact portion extending from the first end of said elongated central portion, said contact portion having a shape substantially similar to the shape of the stem centralizer on the surface opposed to the resected surface of the long bone.

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